

Date,	Time,	Name,	Type,	Status
"4/19/2003",	"11:20:35",	"Robert",	"Payment Received",	"Uncleared"
"4/17/2003",	"14:30:26",	"Tanya",	"Payment Received",	"Completed"
"4/16/2003",	"6:38:28",	"Mark",	"Payment Received",	"Completed"
"4/14/2003",	"19:54:34",	"Igor",	"Payment Received",	"Completed"
"4/12/2003",	"16:41:08",	"artem",	"Payment Received",	"Completed"

Fig. 1



⊞ record	
⊞ record	
- 4/19/2003	
- 11:20:35	
- Robert	
- Payment Received	
- Uncleared	
⊞ record	
⊞ record	
- 4/16/2003	
- 6:38:28	
- Mark	
- Payment Received	
- Completed	
⊞ record	
- 4/14/2003	
- 19:54:34	
- Igor	
- Payment Received	

Fig. 2

record "Robert"	
record "Tanya"	
record "Mark"	
record "Igor"	
4/14/2003	
19:54:34	
Igor	
Payment Received	
Completed	

Fig. 3

```

using System ;
namespace IVDEV . Trees
{
    /// <summary>
    /// Summary description for MyControl
    /// </summary>
    public class MyControl : System . Windows . Forms . UserControl
    {
        private void MyTabPage_Enter(object sender, System.EventArgs e)
        {
            rb = new RepresentationBuilder();
            rb.code = textBox1.Text ;
            rb.path_to_grammar = "C:\\grammars";
            rb.BuildGrammarTree();
            if ( a==1 )
            {
                b=2 ;
                while ( a==1 ){ a+=2 ;}
            }

            //the rest of the code is omitted for clarity...
        }
    }
}

```

Fig. 4

```

using System;
namespace IVDEV.Trees
{
    /// <summary>
    /// Summary description for MyControl
    /// </summary>
    public class MyControl : System.Windows.Forms.UserControl
    {
        private void MyTabPage_Enter(object sender, System.EventArgs e)
        {
            rb = new RepresentationBuilder();
            rb.code = textBox1.Text;
            rb.path_to_grammar = "C:\\grammars";
            rb.BuildGrammarTree();
            if ( a==1 )
            {
                b=2;
                while ( a==1 )
                {
                    a+=2;
                }
            }
            //the rest of the code is omitted for clarity...
        }
    }
}

```

Fig. 5

```
<?php
echo "Example statement\n";

if($a == 1)
{
echo "value in a is 1\n";
}

function foo ($arg_1, $arg_2, ..., $arg_n)
{
echo "Example function.\n";
return $retval;
}

?>
```

Fig. 6

```
<?php
echo "Example statement\n";
if ( $a == 1 )
{
    echo "value in a is 1\n";
}
function foo ( $arg_1 , $arg_2 , ... , $arg_n )
{
    echo "Example function.\n";
    return $retval;
}
?>
```

Fig. 7

```
"if" "(" boolean_expression ")"  
  embedded_statement  
"else"  
  embedded_statement
```

Fig. 8



```
if ( a==1 )
    b=2;
else
    c=3;
```

Fig. 9

⊞ "if" "(" boolean\_expression ")"  
    └ embedded\_statement  
⊞ "else"  
    └ embedded\_statement

Fig. 10

```
⊖ if ( a==1 )  
  |   b=2 ;  
⊖ else  
  |   c=3 ;
```

Fig. 11

```
if (a==1)
    b=2;
```

Fig. 12

⊖ File  
⊖ Line  
⊖ Value  
⊖ Line  
⊖ Value  
⊖ Line  
⊖ Value

Fig. 13

rule representation mapping	representation of an if_statement
<pre>"if" "{" boolean_expression "}"   embedded_statement "else"   embedded_statement</pre>	<pre>if ( a==1 )   b=2; else   c=3 ;</pre>
<pre>"if" "{" boolean_expression "}"   embedded_statement "else"   embedded_statement</pre>	<pre>if ( a==1 )   b=2; else   c=3 ;</pre>

Fig. 14